

## ABSTRACT

A transmission apparatus capable of improving overall throughput of a system by suppressing peaks using some frequencies in a communication band. In this  
5 apparatus, modulation section (102) adaptively modulates transmission data. Combination section (103) combines the waveform of the transmission data and an inverse replica and suppresses peaks equal to or higher than a threshold. When there are peaks equal to or higher than  
10 a threshold, inverse replica generation section (112) extracts the waveform of a peak equal to or higher than the threshold and generates an inverse replica which is the waveform having the inverse characteristic of the extracted waveform. Sub-band selection section (114)  
15 selects frequencies of subcarriers for which MCS having low transmission efficiency is selected and outputs the inverse replica within the range of the selected frequency to combination section (103).